

### **Remarks**

This communication is considered fully responsive to the Office Action. Claims 1-22 were examined. Claims 1-22 stand rejected. Claim 16 is amended merely for purposes of clarity – no new claim recitations are added by this amendment. No claims are canceled. No new claims have been added. Reexamination and reconsideration of the pending claims are respectfully requested.

### **Claim Rejections - 35 U.S.C. 103(a)**

The Office Action rejected claims 1-22 under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent Pub. No. 2003/0204640 to Sahinoja, et al. (“Sahinoja”) in view of U.S. Patent Pub. No. 2004/0098715 to Aghera, et al. (“Aghera”). Applicant respectfully traverses this rejection.

Claim 1 recites “wherein generating comprises predicting the contents of locations in a new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware, and identifying as nodes corresponding locations in the old version of firmware for the mobile electronic device and the new version of firmware for the mobile electronic device, for which contents of the location in the new version of firmware was not able to be predicted” (emphasis added). The Office Action admits that Sahinoja does not teach these recitations. Instead, the Office Action cites to para. [0057]-[0060] and [0065]; and Fig. 10 in Aghera as teaching each of these recitations. Applicant respectfully traverses this interpretation of the reference.

Specifically, the Office Action states that “Aghera teaches blocks are set for DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch” and believes that this teaches “predicting the contents of locations in a new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware” in the claim.

More accurately, Aghera discloses at para. [0058] that “FIG. 10 shows a memory map of the DSP patch blocks 162 shown in FIG. 9. The DSP patch blocks 162 include a patch version table (PVT) 164 and a patch data area 166.” In addition, “[a]n index of all DSP patches stored in the DSP patch blocks 162 is maintained in the PVT 164. The PVT 164 contains a DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in FIG. 10.”

While Figure 10 in Aghera shows a memory map for patch blocks and an index of all patches stored in the patch blocks, there is no teaching of predicting the contents of locations in a new version of firmware based on differences in addresses identified between corresponding symbols in an old version of firmware and the new version of firmware.

Because the Office Action admits that Sahinoja does not teach these recitations; and Applicant further has shown that Aghera does not teach these recitations; it follows that the combination of Sahinoja and Aghera also does not teach these recitations.

Furthermore, Applicant notes that the Office Action has not clearly articulated what in either of these references is being relied on specifically as being the act of

“predicting,” as positively recited in claim 1. Therefore, the rejection is incomplete and/or in error.

For at least the foregoing reasons claim 1 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 1.

Claims 2-15 depend from claim 1, which is believed to be allowable. Therefore, claims 2-15 are also believed to be allowable for at least the same reasons as claim 1. Withdrawal of the rejection of claims 2-15 is respectfully requested.

Claim 16 recites “converting symbols in the new and old images of the firmware into distance information.” The Office Action states that “Sahinoja teaches comparison according to predetermined criteria to updating mobile device” at para. [0016]-[0017]. Sahinoja discloses:

*[0016] According to an embodiment of the invention, a method for generating a request for at least a part of management related information of an electronic device is provided. The management related information is contained in a plurality of nodes arranged as a hierarchical structure, preferably a tree-like structured. At least one of said nodes contains a certain part of the management related information. The generated request is obtained from a coding of an address information, a command and an additional information relating to the hierarchical structure of a plurality of nodes connected to the selected node. The address information describes one selected node of the plurality of nodes arranged hierarchically containing a certain part of the management related information. The command instructs a request receiving device to retrieve the part of management related information contained in the selected node and further instructs the request receiving device to return the retrieved part of management related information.*

*[0017] According to an embodiment of the invention, the command further instructs the request receiving device to retrieve the parts of management related information associated with the plurality of connected nodes and further instructs the request receiving device to return additionally these retrieved parts of*

*management related information, preferably in combination with the retrieved part of management related information associated with the selected node.*

However, Applicant can find no teaching here of ‘comparison according to predetermined criteria to updating mobile device,’ as claimed by the Office Action. Moreover, even if Sahinoja were to teach ‘comparison according to predetermined criteria to updating mobile device,’ this still would not teach converting symbols in the new and old images of the firmware into distance information.

Claim 16 also recites “determining a list of nodes in the old and new images of the firmware.” The Office Action relies on para. [0023] in Sahinoja, which states:

*[0023] According to an embodiment of the invention, the command of the request is a modified GET command. The modification is performed by coding a modified TARGET address in the GET command containing the information relating to the hierarchical structure of a plurality of nodes connected to the selected node.*

However, this does not teach determining a list of nodes in the old and new images.

Claim 16 also recites “wherein generating filter information comprises capturing information regarding addresses where the contents of the location in the new image of firmware was able to be predicted.” The Office Action relies on Sahinoja at para. [0010], [0012], [0020] and [0023]-[0025]. Specifically, the Office Action explains that Sahinoja “teaches address management for nodes and software updates.” However, this reasoning fails to connect the “filter information” disclosed at para. [0019]-[0020] in Sahinoja with the claim recitations. To the contrary, here Sahinoja explains that “[t]he filter information

is used to selectively retrieve parts of management related information from the nodes.” But this does not teach that filter information is used for capturing information regarding addresses where the contents of the location in the new image of firmware was able to be predicted.

Claim 16 further recites “wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in the old version of firmware and the new version of firmware, and identifying as nodes corresponding locations in the old image of firmware and the new image of firmware for which contents of the location in the new image of firmware was not able to be predicted.” These recitations are not taught by the cited references for the reasons already discussed above for claim 1.

For at least the foregoing reasons claim 16 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 16.

Claims 17-21 depend from claim 16, which is believed to be allowable. Therefore, claims 17-21 are also believed to be allowable for at least the same reasons as claim 16. Withdrawal of the rejection of claims 17-21 is respectfully requested.

In addition, claim 17 further recites “wherein the distance information is determined by locating the symbols of the old image and the new image.” The Office Action cites to para. [0016]-[0017]. Here, Sahinoja teaches the address information describes one selected node of the plurality of nodes arranged hierarchically containing a certain part of the management related information. The command instructs a request

receiving device to retrieve the part of management related information contained in the selected node and further instructs the request receiving device to return the retrieved part of management related information. This is opposite of the claim recitation - that is the address information describes a selected node – not distance information. Sahinoja goes on to describe the command further instructs the request receiving device to retrieve the parts of management related information associated with the plurality of connected nodes and further instructs the request receiving device to return additionally these retrieved parts of management related information. But connected nodes is not distance information determined by locating the symbols of the old image and the new image.

Claim 18 further recites “determining addresses of symbols in the old image; determining addresses of corresponding symbols in the new image; comparing the differences in the addresses of the corresponding symbols in the old image and the new image; predicting differences in addresses of subsequent symbols based on the differences in the addresses of previous symbols; determining the symbols for which offsets cannot be predicted; and using the unpredictable symbols as additional node symbols.”

The Office Action relies on Sahinoja at para. [0016] and [0020]-[0024] as teaching determining addresses of symbols in the old image and the new image. Here, Sahinoja describes the management related information is contained in a plurality of nodes arranged as a hierarchical structure, preferably a tree-like structured. However, there is no teaching of determining addresses of symbols in the old and new images.

The Office Action relies on Sahinoja at para. [0057]-[0059] as comparing the differences in the addresses of the corresponding symbols in the old image and the new image. Here, Sahinoja describes the command further instructs the request receiving device to retrieve the parts of management related information associated with the plurality of connected nodes and further instructs the request receiving device to return additionally these retrieved parts of management related information. However, there is no teaching of comparing the differences in the addresses of the corresponding symbols in the old image and the new image.

The Office Action relies on Aghera at para. [0057]-[0059] as teaching predicting differences in addresses of subsequent symbols based on the differences in the addresses of previous symbols. Here, Aghera describes a memory map of the DSP patch blocks, where the DSP patch blocks include a patch version table (PVT) and a patch data area. Multiple DSP Patches may be stored in the DSP patch blocks. An index of all DSP patches stored in the DSP patch blocks is maintained in the PVT. The PVT contains a DSP Patch Version for a particular patch followed by memory address of DSP Patch Data for that particular patch, as shown in FIG. 10. But none of this teaches predicting differences in addresses of subsequent symbols based on the differences in the addresses of previous symbols.

The Office Action relies on Aghera at para. [0065] as teaching determining the symbols for which offsets cannot be predicted. Here, Aghera describes that a particular installation state indicates all the operations to reach that state have been performed completely, and lists installation states and operations that are required to reach a state

from its previous state. But this by itself does not teach determining the symbols for which offsets cannot be predicted.

The Office Action relies on Aghera at para. [0058]-[0060] as teaching using the unpredictable symbols as additional node symbols. Here, Aghera describes that a DSP Patch is not stored in its object format in the flash memory, but as a series of MDI messages that are converted to DSP object code by the patch loader. But this does not teach using the unpredictable symbols as additional node symbols.

Claim 19 further recites “wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase comprises: identifying instructions using instruction prediction; fixing address locations and producing filter information; and fixing data and producing filter information using block hunting.”

Applicant notes that the Office Action relies on “Criss, et al.” – for purposes of responding, Applicant will assume that this is a typographical error and interpret this to be Sahinoja. Clarification in a new grounds of rejection is respectfully requested if Applicant’s interpretation is incorrect.

Applicant also notes that the Office provides no support for rejecting the recitation of “a pre-predict phase is performed to generate filter information.” Therefore, the rejection is incomplete and/or in error.

The Office Action also states that Sahinoja “teaches exploration of nodes identifying nodes or instructions, hence instruction prediction upon request” at Fig. 4 and para. [0110]-[0111] and [0114]-[0116]. However, exploring nodes is not the same as identifying instructions using instruction prediction.



The Office Action also states that Sahinoja “teaches filter information produce after determining address locations.” However, the mere mention of filter information by itself does not teach fixing address locations and producing filter information. The Office Action is either not providing sufficient reasoning for the rejection, or is ignoring portions of the claim recitations in making the rejection.

The Office Action also states that Sahinoja “teaches updating data blocks or nodes that have been identified by address as needed to update.” However, the mere mention of nodes does not teach fixing data and producing filter information using block hunting. The Office Action is either not providing sufficient reasoning for the rejection, or is ignoring portions of the claim recitations in making the rejection.

Claim 20 further recites “wherein the filter information comprises node location and address range information where prediction was successful.” The Office Action relies on the filter information and address identification in Sahinoja to support this rejection. However, the mere mention of filter information and address identification does not teach where prediction was successful. The Office Action is either not providing sufficient reasoning for the rejection, or is ignoring portions of the claim recitations in making the rejection.

Claim 21 further recites “wherein a pre-predict phase is performed to generate filter information, and wherein the pre-predict phase is followed by a predict phase, wherein the predict phase comprises: performing instruction prediction utilizing the generated filter information; and executing block hunting utilizing the generated filter information.” The Office Action relies on Sahinoja at para. [0117]-[0119] as teaching a

pre-predict phase. Here, Sahinoja discusses exploring of the management tree, then he information is retrieved from an identified node, and the retrieved information from the identified nodes can be filtered. But there is no teaching of a pre-predict phase being used to generate filter information. Applicant notes that filtering information is fundamentally different than generating filter information.

The Office Action simply repeats the claim recitation of “wherein the pre-predict phase is followed by a predict phase” without providing any support for rejecting these recitations.

The Office Action then states that Sahinoja “teaches exploration of nodes identifying nodes or instructions, hence instruction prediction upon request.” However, exploration of nodes does not teach performing instruction prediction utilizing the generated filter information.

The Office Action also states that Sahinoja “teaches updating blocks or nodes that have been identified by address as needed to update.” However, updating blocks does not teach block hunting utilizing the generated filter information.

Again, the Office Action is either not providing sufficient reasoning for the rejection, or is ignoring portions of the claim recitations in making the rejection.

Claim 22 recites “converting symbols in the new and old images of the firmware into distance information; determining a list of nodes in the old and new images of the firmware; generating information for a first filter; creating a partially modified old image of the firmware utilizing the first filter; generating information for a second filter; creating a modified old image of the firmware utilizing the second filter and the partially

modified old image of the firmware; wherein determining comprises predicting the contents of locations in the new version of firmware based on differences in addresses identified between corresponding symbols in the old version of firmware and the new version of firmware, and identifying as nodes corresponding locations in the old image of firmware and the new image of firmware for which contents of the location in the new image of firmware was not able to be predicted based upon the old image of firmware” (emphasis added). These recitations are not disclosed or taught by the cited references, as already explained in more detail above.

Furthermore, the Office Action has not provided any support for the rejection of the recitations of “creating a partially modified old image of the firmware utilizing the first filter” and “creating a modified old image of the firmware utilizing the second filter and the partially modified old image of the firmware,” as positively recited in claim 22. The Office Action simply repeated these recitations in the rejection, without any citation to either of the references as teaching these recitations. Therefore, the rejection is incomplete and/or in error.

For at least the foregoing reasons claim 22 is believed to be allowable over the cited references and Applicant respectfully requests withdrawal of the rejection of claim 22.

**Conclusion**

The Applicant respectfully requests that a timely Notice of Allowance be issued in this matter.

Respectfully Submitted,

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Dated: Feb. 21, 2010

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